Attorney Docket No. GMX-002

Appl. No. 10/724,532

Amdt. Dated October 26, 2005

Reply to Office Action of July 29, 2005

Amendments to the Claims:

Claims 1-16 are pending in the application.

Claims 1-16 have been amended.

New Claims 17-20 have been added. A fee transmittal form and the appropriate fee for one additional independent claim, are enclosed. No new matter has been added.

This listing of claims will replace all prior versions, and listings, of claims in the application:

- 1. (Amended) An isolated polypeptide sequence-comprising the amino acid sequence of SEQ ID NO:1 with at least ene two amino acid substitution at a two locations selected from the group consisting of L31, N34, F35, 138, L42, 148, V49, and L52 Leu-9, Asn-12, Phe-13, Ile-16, Leu-20, Ile-26, Val-27, and Leu-30.
- 2. (Amended) The <u>isolated</u> polypeptide sequence of claim 1, wherein the substitution<u>s</u> is <u>are</u> with a non-hydrophobic amino acid.
- 3. (Amended) The <u>isolated</u> polypeptide sequence of claim 1, wherein the substitutions is are with an amino acid selected from the group consisting of alanine and glycine.
- 4. (Amended) The <u>isolated</u> polypeptide sequence of claim 3, wherein substitutions are made at L31 and N34 Leu-9 and Asn-12.
- 5. (Amended) The <u>isolated</u> polypeptide sequence-of claim 1, wherein the polypeptide is linked to a compound to be targeted to a sarco(endo)plasmic region of a cell.
- 6. (Amended) The <u>isolated</u> polypeptide sequence of claim 1, wherein the polypeptide is linked to a macromolecule to be targeted to a sarco(endo)plasmic region of a cell.
- 7. (Amended) The <u>isolated</u> polypeptide sequence of claim 4, wherein the polypeptide is linked to a macromolecule or compound to be targeted to a sarco(endo)plasmic region of a

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cell.

- 8. (Amended) An isolated polypeptide sequence-comprising the amino acid sequence of SEQ ID NO:2.
- 9. (Amended) The <u>isolated polypeptide</u> sequence of claim 8, wherein the polypeptide is linked to a compound to be targeted to a sarco(endo)plasmic region of a cell.
- 10. (Amended) The <u>isolated</u> polypeptide sequence of claim 7 8, wherein the polypeptide is linked to a macromolecule to be targeted to a sarco(endo)plasmic region of a cell.
- 11. (Amended) An isolated nucleic acid comprising a nucleotide sequence encoding the polypeptide sequence of SEQ ID NO:1 with at least ene-two codon substitutions encoding an amino acid substitution at an two amino acid locations selected from the group consisting of L31, N34, F35, I38, L42, 148, V49, and L52 Leu-9, Asn-12, Phe-13, Ile-16, Leu-20, Ile-26, Val-27, and Leu-30.
- 12. (Amended) The <u>isolated</u> nucleic acid of claim 11, wherein the codon substitutions encodes a non-hydrophobic amino acid
- 13. (Amended) The <u>isolated</u> nucleic acid of claim 11, wherein the codon substitutions encodes an amino acid selected from the group consisting of alanine and glycine.
- 14. (Amended) The <u>isolated</u> nucleic acid of claim 11, wherein the nucleotide sequence is linked to a second nucleotide sequence encoding a protein to be targeted to a sarco(endo)plasmic region of a cell.
- 15. (Amended) An isolated nucleic acid comprising a nucleotide sequence selected from nucleotide sequences represented by SEQ ID NOS:3, SEQ ID NO:4, SEQ ID NO:5, and SEQ ID NO:6.

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sarco(endo)plasmic region of a cell.

16. (Amended) The <u>isolated</u> nucleic acid of claim 15, wherein the nucleotide sequence is linked to a second nucleotide sequence encoding a protein to be targeted to a sarco(endo)plasmic region of a cell; or wherein the nucleotide sequence is linked to a <u>compliment of a second nucleotide sequence encoding a protein to be targeted to a</u>

- 17. (New) A sarco(endo)plasmic localization signal, for targeting a compound or a macromolecule to the sarco(endo)plasmic region of a cell, comprising an isolated polypeptide comprising the amino acid sequence of SEQ ID NO:1 with at least one amino acid substitution at a location selected from the group consisting of Leu-9, Asn-12, Phe-13, Ile-16, Leu-20, Ile-26, Val-27, and Leu-30.
- 18. (New) The sarco(endo)plasmic localization signal of claim 17, wherein the substitution is with a non-hydrophobic amino acid.
- 19. (New) The sarco(endo)plasmic localization signal of claim 1, wherein the substitution is with an amino acid selected from the group consisting of alanine and glycine.
- 20. (New) The sarco(endo)plasmic localization signal of claim 3, wherein substitutions are made at Leu-9 and Asn-12.